



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,940	10/30/2003	Francois Paul	4590-230	6289

7590 10/18/2007
LOWE HAUPTMAN GILMAN & BERNER, LLP
Suite 310
1700 Diagonal Road
Alexandria, VA 22314

EXAMINER

MACK, SYLVIA

ART UNIT	PAPER NUMBER
----------	--------------

2617

MAIL DATE	DELIVERY MODE
-----------	---------------

10/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/695,940	PAUL, FRANCOIS
	Examiner Sylvia Mack	Art Unit 2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 03 October 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-13 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 October 2003 is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

Drawings

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because drawings are object to by the Draftperson under 37 CFR 1.84 (see attached form PTO-948). Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 4 - 7, 9, 10, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young et al. (US Pat. 6,317,436), henceforth Young, in view of Garcia-Luna-Aceves et al. (US Pub. 2002/0067736), henceforth Aceves.

Regarding claims 1 and 7, Young teaches a method for the allocation of access to a broadcasting medium by several stations, wherein the stations are provided with a digital processing circuit adapted to execute the steps of a method (Abstract) comprising the following steps:

using two symbols corresponding respectively to a reception state and to a transmission state (Uses symbols, T_i , R_i , respectively to represent a transmission and reception state [col. 4, lines 34 – 52]).

b) for any unspecified station S_i during an attempt to make transmission, starting at a given identification slot, b.1) for i varying from 1 to n ; b.1.1) (Discussed are nodes (unspecified stations) in a mobile multi-hop radio network employing unifying slot assignment protocol (USAP) and time division multiple access (TDMA) slot assignment method to facilitate communication between nodes and channel/resource allocation [col. 1, lines 21 – 36, col. 1, lines 51 – 65, col. 2, lines 51 – 64]. TDMA structure comprises

time divisions consisting of time frames. Each time frame includes plurality of time slots or broadcast slots (identification slots varying from 1 to n) [col. 3, lines 8 – 20]);

if the value of b_i is equal to the symbol corresponding to the reception state, the station S_i receives during the slot $k+i-l$; if it detects a signal sent by another station it considers itself not to be chosen; if it detects nothing, it continues to scan the bits b_i ; b.1.2) if the value of b_i is equal to the symbol corresponding to the transmission state, the station

transmits during the slot $k+i-1$ (Discussed is the implementation of a multicast or broadcast by a transmitting node to multiple receiving nodes as a means of establishing communication. Time slots (slot $k+i-1$) are shared or allocated according to whether a node is transmitting or receiving [col. 4, lines 18-39, lines 42 – 53]. Inherently, if a receiving node detects a signal it will stop scanning for a signal or transmission and prepare to respond otherwise the receiving node will continue to search or scan for a signal or transmission); and

c) allocating the medium to the station that has performed the step b.1) without receiving the transmission symbol (After receiving a broadcast, a node has the option to wait to receive a confirmation (transmission symbol) from the transmitting node or to use the transmit allocation immediately without receiving a confirmation (transmission symbol) [col. 4, lines 63 – 67, col. 5, lines 1 – 4]).

Young does not teach encoding the identifier I of each of the stations, on a number n of bits. Aceves encoding the identifier I of each of the stations, on a number n of bits (page 1, paragraph [0004], [0008], page 3, paragraph [0048], page 4, paragraphs [0055] – [0056], Fig. 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Young to incorporate encoding the identifier I of each of the stations, on a number n of bits as taught by Aceves in order to provide the node with a unique ID number to facilitate communication, identification, location, and routing to a designated node in a network (page 3, paragraph [0048]).

Regarding claims 2 and 10, as applied to claims 1 and 7, the combination above further discloses comprising a step b.0) preliminary to the step b.1) for the transmission of the transmission symbol by the station Si and wherein the steps b.1), b.1.1), b.1.2) may be carried out on identification slots varying from k +1 to k+n (Young: Discussed are nodes (unspecified stations) in a mobile multi-hop radio network employing unifying slot assignment protocol (USAP) and time division multiple access (TDMA) slot assignment method to facilitate communication between nodes and channel/resource allocation [col. 1, lines 21 – 36, col. 1, lines 51 – 65, col. 2, lines 51 – 64]. TDMA structure comprises time divisions consisting of time frames. Each time frame includes plurality of time slots or broadcast slots (identification slots varying from 1 to n) [col. 3, lines 8 – 20]).

Regarding claims 4 and 12, as applied to claims 1 and 7, the combination above further discloses using an identification number taken in an interval [0, N-1] with N=2n (Discussed is a TDMA structure that includes time slots, within time frames, comprising multiple broadcast slots (col. 3, lines 8-20). Each time frame consist of eight (N = number of slots or identification number) reservation/standby broadcast slots. The interval of the number slots is zero through 7, 0 -7, ([0, N-1]). Therefore eight is equal to 2^3 or $8 = 2^3$ ($N = 2^n$) [col. 7, lines 12 – 28, Fig. 6]).

Regarding claims 5 and 13, as applied to claims 4 and 12, the combination above further discloses the identification numbers are made to vary by the application of a permutation of the interval (Aceves: page 1, paragraphs [0010], [0012], page 3, paragraph [0045]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Young to incorporate the identification numbers are made to vary by the application of a permutation of the interval as taught by Aceves in order to generate random numbers to eliminate scheduling conflict and generate a list of numbers without repetition.

Regarding claims 6 and 9, as applied to claims 1 and 7, the combination above further discloses wherein the broadcasting medium is a radio station (Young: Discussed are nodes (radio stations) operating in a radio network (col. 1, lines 21 – 26) and wherein the stations are transmitter-receiver units (Young: Each node (radio station) comprises a wireless transceiver (transmitter/receiver) unit [col. 2, lines 51-68]).

Claims 3 and 11 are rejected under 35 U.S.C. 103(a) Young et al. (US Pat. 6,317,436), henceforth Young, in view of Garcia-Luna-Aceves et al. (US Pub. 2002/0067736), henceforth Aceves, as applied to claims 1 and 7 above, and further in view of Eing A, et al. (US Pat. 4,516,205), henceforth Eing.

Regarding claims 3 and 11, as applied to claims 1 and 7, the combination above teaches a reception and transmission state associated with a given slot (Young: Uses symbols, T_i , R_i , respectively to represent a transmission and reception state [col. 4, lines 34 – 52]) but does not teach using binary encoding and the reception operation receive 1 when a station detects a signal coming from another station and receive 0 when it receives no signal and the send 1 operation when the station transmits a signal. Eing teaches not teach using binary encoding and the reception operation receive 1 when a station detects a signal coming from another station and receive 0 when it

receives no signal and the send 1 operation when the station transmits a signal (col. 3, lines 28 – 56).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Young and Aceves to incorporate using binary encoding and the reception operation receive 1 when a station detects a signal coming from another station and receive 0 when it receives no signal and the send 1 operation when the station transmits a signal as taught by Eing to function as a signal indicator to control specific operations or to determine the condition of part of a system.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Young et al. (US Pat. 6,317,436), henceforth Young, in view of Wang et al. (US Pub. 2005/0201340), henceforth Wang.

Regarding claim 8, the combination above teach the limitation of claim 7, but does not teach a station configuration device that is separate from the stations. Wang teaches a station configuration device that is separate from the stations (Abstract, page 1, paragraph [0006], Fig. 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Young and Aceves to incorporate a station configuration device that is separate from the stations as taught by Wang to provide a station configuration device, such as a controller, in order to control wireless devices within a “geographical transmission range”, as well as, assigns time slots and broadcast timing beacons (page 1, paragraph [0006]).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sylvia Mack whose telephone number is (571) 270-1212. The examiner can normally be reached Monday – Friday from 8:00 am to 5pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Signature: Sylvia Mack
Sylvia Mack
Examiner / Art Unit 2617


LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER